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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/549,538

09/15/2005

Hitoshi Sato

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EXAMINER

HANNON, CHRISTIAN A

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

06/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/549,538

Applicant(s)

SATO ET AL.

Examiner

Christian A. Hannon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/15/2005 & 5/22/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 9/15/2005 & 5/22/2006 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statements.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-8 are rejected under 35 U.S.C. 102(a) as being anticipated by Sudo et al (US 7,146,195), hereinafter Sudo.

Regarding claim 1, Sudo teaches a biaxial hinge of a biaxial structure having a rotating shaft and an opening/closing shaft (Figure 1, Items 4 & 2/3; Column 5, Lines 28-31), in which a rotating shaft member is inserted and attached to an outer periphery of said rotating shaft member (Figure 1, Stationary Plate item 31; Column 6, Line 53),

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and an opening/closing torque unit mechanism for opening and closing operations is disposed to either the left or the right of said rotation-side member, Sudo teaches that open-close hinges 2 & 3 are disposed to the left and right side of the pivotal hinge unit 4 or rotating shaft, wherein two or more sets of pressing components (Figure 1, Items 22-27) in which a pressing member with a substantially spherical distal end (Figure 1, Item 22 'Two Balls') is incorporated into an elastic body (Figure 1, Item 24 'Coil Spring') are assembled in the rotation side member with an embedded structure (Column 8, Lines 30-41), at least one groove extending in a radial direction is formed on one side of a sliding member (Figure 1, Item 21 'First Disk') disposed so as to rotate synchronously with the rotating shaft member, in order to abut against the pressing components and generate a click, and said pressing members and said sliding member are elastically pressed together, thereby generating sliding friction torque and click torque during rotation (Column 11, Lines 9-20).

Regarding claim 2, Sudo teaches a biaxial hinge of a biaxial structure having a rotating shaft and an opening/closing shaft (Figure 1, Items 4 & 2/3; Column 5, Lines 28-31), in which a rotation support member and a sliding member are closely fixed to a rotating shaft member (Figure 1, Stationary Plate item 31, Sliding Disk item 21; Column 6, Line 53), a rotation-side member is inserted and attached to an outer periphery of said rotating shaft member (Figure 1, Stationary Plate item 31), and an opening/closing torque unit mechanism for opening and closing operations is disposed to either the left or the right of said rotation-side member, Sudo teaches that open-close hinges 2 & 3 are disposed to the left and right side of the pivotal hinge unit 4 or rotating shaft,

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wherein two or more sets of pressing components (Figure 1, Items 22-27) in which a pressing member with a substantially spherical distal end (Figure 1, Item 22 'Two Balls') is incorporated into an elastic body (Figure 1, Item 24 'Coil Spring') are assembled in the groove extending in a radial direction is formed on one side of the sliding member closely fixed to the rotation support member is formed in order to abut against the pressing components and generate a click, and said pressing members and said sliding member are elastically pressed together, thereby generating sliding friction torque and click torque during rotation (Column 11, Lines 9-20).

Regarding claim 3, Sudo teaches a biaxial hinge of a biaxial structure having a rotating shaft and an opening/closing shaft, in which a rotation support member is closely fixed to a rotating shaft member (Figure 1, Items 4 & 2/3; Column 5, Lines 28-31), a rotation side member is inserted and attached to an outer periphery of said rotating shaft member (Figure 1, Stationary Plate item 31), and an opening/closing torque unit mechanism for opening and closing operations is disposed to either the left or the right of said rotation side member, Sudo teaches that open-close hinges 2 & 3 are disposed to the left and right side of the pivotal hinge unit 4 or rotating shaft, wherein two or more sets of pressing components (Figure 1, Items 22-27) in which a pressing member with a substantially spherical distal end (Figure 1, Item 22 'Two Balls') is incorporated into an elastic body (Figure 1, Item 24 'Coil Spring') are assembled in the rotation side member with an embedded structure (Column 8, Lines 30-41), at least one groove extending in a radial direction is formed on a face of the side of the rotating shaft support member that abuts against the pressing member in order to abut against

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the pressing components and generate a click, and said pressing members and said rotating shaft member are elastically pressed together, thereby generating sliding friction torque and click torque during rotation (Column 11, Lines 9-20).

Regarding claim 4, Sudo teaches the biaxial hinge according to claim 1, wherein one of a coil spring, a coned disk spring, a corrugated leaf spring and a thin leaf spring is employed as the elastic body (Figure 1, Coil Spring Item 24).

Regarding claim 5, Sudo teaches the biaxial hinge according to claim 1, wherein a through hole is provided in a center of the rotating shaft member. Examining Figure 1 in becomes apparent that there is a through hole in provided in the center of the pivotal hinge unit item 4 of Figure 1. (See: Figure 1, hole extending upward from item 78).

Regarding claim 6, Sudo teaches the biaxial hinge according to claim 1, wherein a rotation stopper mechanism to restrict a rotational range between the rotating shaft support member or the rotating shaft member and the rotation side member is provided (Column 7, Lines 16-31).

Regarding claim 7, Sudo teaches the biaxial hinge according to claim 1, wherein the opening/closing torque unit mechanism for opening and closing operations is assembled as an independent unit, a click generating mechanism that incorporates a cam or a stopper to limit an opening/closing angle is installed before hand in said opening/closing torque unit mechanism, and the opening/closing torque unit mechanism is fitted to the rotation side member (Column 8, Lines 30-41; Figure 1, Item 27).

Regarding claim 8, Sudo teaches a portable telephone equipped with the biaxial hinge according to claim 1 (Column 1, Lines 6-8).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mizuta et al (US 2003/0064758) disclose a foldable portable information terminal.

Mizuta et al (US 7,158,816) disclose a foldable and portable mobile communication terminal.

Kim (US 6,941,618) discloses a hinge device for portable wireless terminals.

Kfoury (US 6,549,789) discloses a portable electronic device with an adaptable user interface.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian A. Hannon whose telephone number is (571) 272-7385. The examiner can normally be reached on Mon. - Fri. 8:00 AM - 4:30 PM.

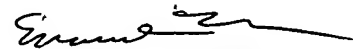
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



C. A. Hannon
May 21, 2007



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